A NEW SPECIES OF *TOMOCERUS (S.S)* (COLLEMBOLA: TOMOCERINAE) FROM CHINA[1]

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ABSTRACT: A new Chinese species, *Tomocerus cheni*, from China is described. It is similar to the Japanese *T. cuspidatus*, Börner 1909, but differs in body color, unguiculus and other features.

Nearly 50 species have been described in the genus *Tomocerus (s.l.)*; however, only 12 species were described or reported from China: *Tomocerus (Tomocerina) minutus* Tullberg 1876 from Shanxi and 11 species in the genus *Tomocerus (s.s.)*: 4 from Tibet (*monticolus, obsculus, parvus* and *zayensis* Huang and Yin 1981), 2 from Yunnan (*varius* Folsom 1899 and *folsomi* Denis 1929), *caputiviolaceus* Lee 1975 and *cuspidatus* Börner 1909 from Taiwan, *kinoshitai* Yosii 1954 from Hunan, *ocreatus* Denis 1948 from Zhejiang, and *sibiricus* Reuter 1891 from Hebei. A new species of the subgenus *Tomocerus (s.s.) cheni*, from Anhui Province, is described here.

Tomocerus (S.S.) cheni, NEW SPECIES

Color: Background color pale yellow with purplish blue pigment. Head dark with irregular pale spots; eye patches dark. Antennal segments I, IV and basal part of III pigmented, II and most distal part of III pale. Thoracic segments and anterior margin of abdominal segment I irregularly pigmented. Abd. V & VI sometimes with a few scattered pigment patches. Base of coxae with dark pigment. Tibiotarsus with scattered pigment (Fig. 1).

Head: Antennae short, respectively 0.5-0.8 and 2.7-3.1 times as long as body and Cephalic diagonal; ratios of Ant. I-IV = 1.0/1.4-2.0/4.5-7.3/1.2-2. Eyes 6+6, A & B largest, E & F smallest (Fig. 2). Labral setae 4/5,5,4, marginally with 4 recurving spinules. Head capsule anteriorly with 2,4 large setae, posteriorly with 43-54 small setae (Fig. 3).

Body: Thoracic macrochaetae and bothriotricha as shown in Fig. 4. Trochanteral organ not clearly seen. Unguis rather slender; a pair of well developed pseudonychia 1/3-1/2 as long as inner edge of unguis; inner teeth 5-7, 5-7 & 5-6 respectively on legs I-III. Unguiculus lanceolate with 1 outer tooth and 1-2 inner teeth. Tenent hair well developed, as long as inner edge of unguis, apex spatulate (Fig. 5). Tibiotarsus with numerous pointed smooth setae in different sizes; ventral side with 3-4(5), 6(4,8), 6-8 large blunt spinelike setae respectively on legs I-III (Fig. 6).

Abdominal macrochaetae and bothriotricha on segments I-V as shown in Fig. 4. Tenaculum unscaled with 4+4 teeth, corpus with 8-12 smooth setae (Fig. 7). Ventral tube scaled, posterior face with numerous smooth setae in different sizes, anterior face not clearly seen, lateral flap with about 70 smooth setae in different sizes (Fig. 8). Ratios of manubrium/dens/mucro = 2.8-4/5-5.6/1. Manubrium laterally with a row of large ciliate setae on each side, these setae more strongly tapered near tip; dorsally with 2 longitudinal bands (setaceous stripes, Yosii 1967) of numerous weakly ciliate to striate, acuminate setae in different sizes, about 20 of them very

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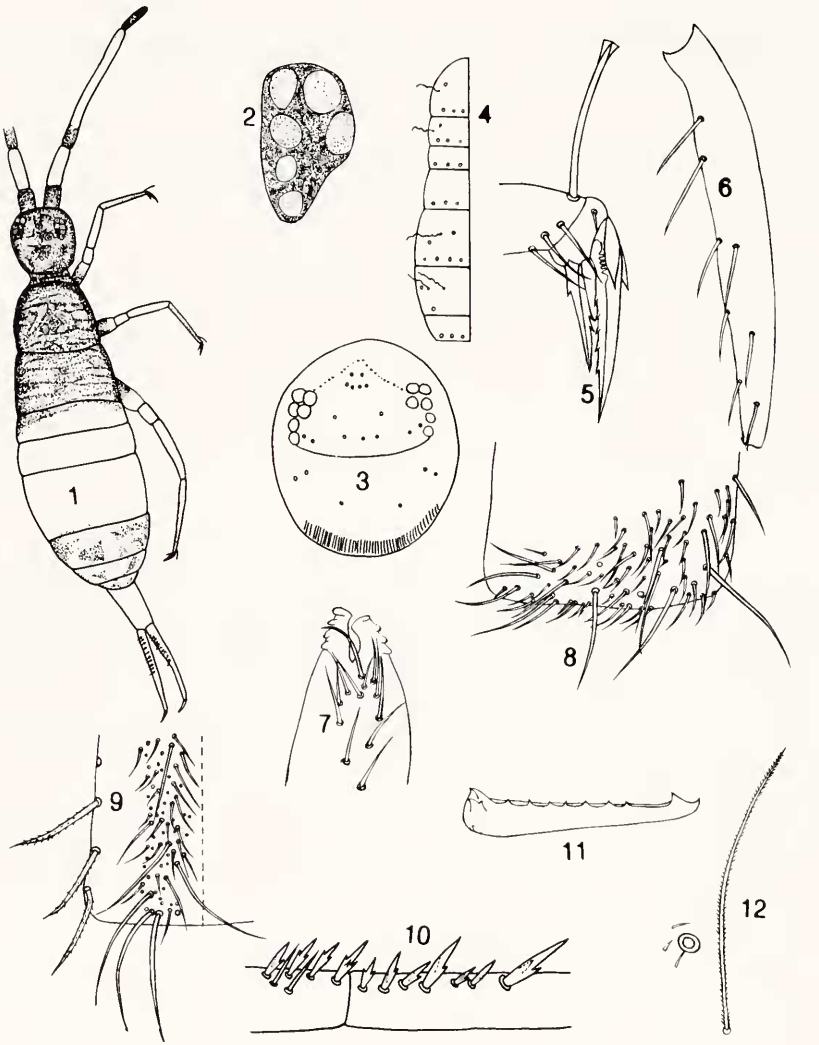

Tomocerus cheni, All figures of type specimens. Fig. 1. Habitus; 2. Eyes of left side; 3. Cephalic chaetotaxy; 4. Chaetotaxy of body; 5. Hind foot complex; 6. Large setae of hind tibiotarsus; 7. Tenaculum; 8. Lateral flap of ventral tube; 9. Left half of distal part of manubrium (dorsal view); 10. Dental spines; 11. Mucro; 12. Setulae at base of macrochaeta and bothriothrix.

large; no scales present between setaceous bands (Fig. 9). Dental spines as 4(3)-5/3(2)-5,1,2(1,4),1; heavy chestnut brown and each with 2(3) secondary teeth (spinules) near base. 1-2 (rarely 3) small, finely ciliate, spiny setae present interior to basal dental spines (Fig. 10). Mucro elongate with numerous ciliate setae; outer dorsal lamella with 5-7 intermittent teeth; outer basal tooth with a corner toothlet; apical and anteapical teeth subequal (Fig. 11). Upper anal flap of Abd. VI with 7 large, striate primary setae arranged in an irregular transverse row.

Scales brownish, hyaline and heavily striated. Each trunk macrochaeta surrounded by 3-6 setulae, bothriotricha without setulae at base (Fig. 12).

Size: Maximum length 3.6 mm.

Type materials Holotype: ♀, China: Anhui Province, Yellow Mt., VII-16-1990, leaf litter in deciduous forest and in moss, collection number 8223.

Paratypes: 7 ♀♀, same data as holotype, collection numbers 8223 & 8213

Other locality: 1 ♀, Anhui: Jinzhai County: Tiantangzhai Park, collection number 8306. All specimens will be deposited in the Department of Biology, Nanjing University.

Etymology: This species is named after Prof. Jian-xiu Chen in the Department of Biology, Nanjing University, whose help was essential.

DIAGNOSIS

The large manubrial dorsal setae ("principal setae" of Yosii 1967) are acuminate in *T. cheni* sp. nov. rather than blunt. This species is very similar to *T. cuspidatus* Börner 1909; however, it differs from the latter as shown below:

	cheni	*cuspidatus**	*cuspidatus***
Maximum body length	3.6	6.0	6.5
Scales on tenaculum	absent	present	?
Blunt "principal" setae on manubrium	absent	2+2,1	?
Spinules on dental spine	2(3)	3-6	3-5

* sensu Yosii 1967
** sensu Lee 1975
? unknown

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is primarily a predator, then secondarily an herbivore and detritivore (Wiggins, 1984). The internal environment of the pitcher plant leaves offers live larvae of other species, plant materials, and numerous decomposing remains. Analysis of the larval gut contents revealed numerous pieces of insect cuticle that may have been consumed while the larvae were inside the pitchers.

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